

ANTHRAX

What is anthrax?

Anthrax is a disease caused by *Bacillus anthracis*, a bacteria that can form spores. A spore contains the vital parts of the bacteria in a hard cover that allows it to live until good conditions allow it to grow. The bacteria spores can live in soil for many years. Anthrax most commonly occurs in grazing animals such as cattle, sheep, and goats.

How is anthrax spread?

Anthrax is not contagious. That is, you cannot get anthrax from contact with a person who is sick with anthrax.

Grazing animals get anthrax from eating spores in the soil. When the animal dies and is not disposed of properly new spores can be left behind in the soil. Anthrax is not spread through animal milk or from one animal to another. Human cases of anthrax are mostly seen in poor countries where people may get sick from preparing and eating food from an animal that died of anthrax. It is also seen in people who handle animal hides and skins, such as wool factory workers. Modern farming methods and animal vaccines have mostly wiped out anthrax in the United States.

Anthrax has also been made into a biological weapon. In 2001, processed anthrax spores were mailed in letters causing 22 people in the eastern United States to become ill, including five deaths. In 1979, an accident in a Soviet weapons plant released anthrax into the air killing more than sixty people in a nearby town.

What is the disease caused by anthrax?

In humans, anthrax may occur in three types depending on how it enters the body.

- **Cutaneous (skin)** – anthrax spores or bacteria enter the skin through a cut or scratch. In one to twelve days a small red raised spot that looks like an insect bite or blister forms and turns into a sore with a thick black scab. Most cases are cured with antibiotics. Without treatment the chances of death are about one in five.
- **Inhalational** – anthrax spores are breathed into the lungs. Symptoms may begin in two to 45 days but most often within one week. Flu-like symptoms of fever, headache, cough, and muscle aches develop first, followed by sudden rise in fever, shaking chills, trouble breathing and collapse. Vomiting and stomach pain may occur. The chance of death is high unless antibiotics can be started very early in the disease. This type is very rare.

- **Gastro-intestinal** – from eating undercooked meat of an animal that had anthrax. Symptoms of nausea, vomiting, diarrhea, stomach pain and fever usually begin two to five days after eating the meat. About half of people with this type may die.

How do you tell if someone has anthrax?

Anthrax disease can be confirmed by tests that grow the bacteria from blood or other body fluids. This can be done in many hospital laboratories, but needs to be confirmed by public health laboratories.

What is the treatment for anthrax?

Antibiotics are used to treat all forms of anthrax and should be given as soon as possible when someone is sick. Anthrax vaccine is currently only advised for people in certain high-risk jobs. Public health officials may sometimes advise antibiotics or vaccines to prevent sickness in people who may have breathed or had skin contact with anthrax spores.

Is there anthrax in California?

There are cases of anthrax in farm animals in California every few years. For human disease, up until the 1960s, one or two human anthrax cases were reported each year. The last Californian who died from anthrax was a weaver who got it from spores in wool from Pakistan in 1976. There has not been any known intentional anthrax attacks in California. Since 2001, there have been hundreds of letters and other powders sent to state and local public health laboratories for anthrax testing. These have all been hoaxes or false alarms.

What do I do if I think I have been exposed to anthrax?

If you see a package or envelope that you think may contain anthrax, do not open it. Leave the area, close any doors, and take actions to prevent others from entering the area. Immediately wash your hands with soap and water. Call 911 or local law enforcement for additional instructions.

If you believe you were exposed to anthrax in your line of work or have symptoms, contact your employer or physician for instructions. They may need to discuss the situation with the local health department or law enforcement officials to find out if anthrax was present. In the event of an intentional anthrax attack in your area, pay attention to media alerts and follow the instructions of public health officials.

What is California doing to protect people from anthrax?

State and local health officials are working together with hospitals to train and prepare for anthrax attacks. Stockpiles of medications and other supplies are readily available if needed.

Where can I find more information about anthrax?

For further information regarding anthrax, you can access the Center for Disease Control's public fact sheet at

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/anthrax_g.htm .

More information about anthrax for postal workers, physicians, building managers, and other specialized groups is on the CDC's main anthrax page

<http://www.bt.cdc.gov/agent/anthrax>.